

## DEQ Wind Energy Regulatory Advisory Panel (Wind RAP) Meeting

August 6, 2009

Final Meeting Notes

**Location:** DEQ Central Office, 2<sup>nd</sup> Floor Conference Room  
629 E. Main Street, Richmond, VA 23219

**Start:** 9:35am

**End:** 4:15pm

**RAP Lead/Facilitator:** Carol Wampler, DEQ

**Recorder:** Debra Miller, DEQ

### **RAP Members Present:**

Larry Jackson, Appalachian Power  
Stephen Versen, VDACS  
Tony Watkinson, VMRC  
Jayme Hill, Sierra Club-VA Chapter  
Dan Holmes, Piedmont Env Council  
Tom Smith, DCR  
James Golden, DEQ  
Judy Dunscomb, TNC  
Nikki Rovner, Deputy SNR  
Ronald Jenkins, DOF

Mary Elfner, Audubon  
Bob Bisha, Dominion  
Larry Land, Virginia Assoc. of Counties  
Ken Jurman, DMME  
David Whitehurst, DGIF  
Theo de Wolff, Seawind  
Maria Papadakis, JMU (alternate)  
John Daniel, Troutman Sanders  
Richard Reynolds, DGIF (alternate)

### **RAP Members Absent:**

Jonathan Miles, JMU  
Julie Langan, DHR  
Ray Fernald, DGIF

### **Guest Speaker:**

Ed Arnett, Ph.D, Bat Conservation International (by webinar)

### **Public Attendees:**

John Davy, DCR (alternate)	Larry Lombardi, City of Norfolk/Dept of Development
David Phemister, TNC (alternate)	Lucille Miller, Highlanders for Responsible Development
Perida Giles, VDACS	Ken Hutcheson, Virginia Alternative & Renewable Energy Association
	Robert Hare, Dominion Resources

### **Agenda Item: Introductions**

**Discussion Leader:** Carol Wampler, RAP Leader

**Discussion:** The RAP members and other attendees were welcomed and asked to introduce themselves and their affiliation. After the introductions, Carol recapped the challenges and goals for this RAP.

### **Agenda Item: Impacts of Wind Energy on Bats**

**Discussion Leader:** Dr. Ed Arnett

**Discussion:** Dr. Arnett presented background information on research that has been accomplished regarding bats and wind energy. Dr. Arnett's presentation will be sent to all RAP members/alternates/interested parties for future reference. Additionally, much of the information for the presentation can be found under research at the [Bats and Wind Energy Cooperative's](#) website. Dr. Arnett explained that bats play a critical role in agriculture and even ecotourism. They are long lived and slow reproducing which makes additive fatalities an issue of concern. In 2003, the issue of bats and wind energy at West Virginia's Mountaineer Facility raised concerns as a number of bats were killed. Studies indicate that there are concerns for forest dwelling bats (in the east, the main ones are hoary, eastern red, and

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silver-haired) from wind facilities that are placed along mountain ridge tops. However, there seem to be no clear patterns yet discovered and it was also noted that bat fatalities increased, paradoxically, at low wind speeds less than 6 m/s. Research is continuing to look for patterns so that predictable information can be used for siting these wind facilities. Information on barotrauma and bats was also provided as this barotrauma effect also contributes to bat fatalities (not just striking the blades). Mitigation options were also reviewed. For pre-construction, the main concern is to avoid building these facilities in high risk areas (flight areas, caves, etc.). To date, there is minimal analysis that has been done to link pre-construction assessments with post-construction fatalities. Much of this is due to there not being enough studies and the limited ways there exist to study bats. Acoustic deterrent studies are on-going. Research into bat fatalities indicates that there is a peak in the mid-summer to fall with a small peak in spring. This correlates to mating and migration patterns for the bats. Post-construction options for mitigation were discussed. The most recent research has been in curtailing the cut-in speed for turbines to wind speeds of 6 m/s or below. The presentation was finished with discussion of conclusions and next steps. In mitigation, a study in PA is looking at "white noise" and creating a deterrent around the blades so that bats will stay away. Currently, there is no commercially available bat deterrent.

After the presentation, the RAP asked questions regarding bats and wind energy. The first question was if there were models/guidelines from other states that may prove helpful. In this area, Ohio, NY, and PA do have guidelines. Pennsylvania's are very detailed and comprehensive and set a very high bar in obtaining consistent data. There could be an advantage of having similar regional guidelines, so that the data obtained is consistent and the analysis could provide more insight. A question on the type of information that a one-year study, which is a statutory time limit, was also asked. As the variability can be extreme from year to year, it is difficult to set parameters. One may or may not get the data you need based on a year long study. The final question was whether there was any ongoing initiative to coordinate research concerning the bats with that concerning the birds. It was noted that those talks are beginning and in Texas the bat researchers and bird researches are working together on guidelines.

### **Agenda Item: Impacts of Wind Energy on Birds**

**Discussion Leader:** Mary Elfner, Audubon (and RAP Member)

**Discussion:** Prior to the presentation, there were a couple of quick follow-up questions related to the earlier presentation. The first question was regarding the 12 month pre-construction monitoring. It was noted that data from preconstruction monitoring is difficult to relate to post-construction. A lot of the studies that are focusing on preconstruction are looking at high threat areas and threatened and endangered species, and there is still a lot of research on preconstruction monitoring to determine higher risk areas and what distances away from high risk areas are needed (i.e., not in vicinity of bat cave, but how far away do you need to be?). There are other permit timeframes involved with these projects, such as USFW. It was noted that a flow chart of what is needed and what is required would be very helpful. The second question was in relation to the Wise County proposed location and if it had been assessed or assessment started yet. In response, it was noted that some of those studies have started and that it is moving forward under a partnership. The final note was that there are very few facilities that have done both pre- and post-construction monitoring and very little analysis to find correlations.

Carol introduced Mary Elfner from the Audubon Society. Ms. Elfner presented information on the southeast bird impacts at wind energy facilities. Ms. Elfner's presentation will be sent to all RAP members/alternates/interested parties for future reference. As was noted for bats, there is also a multi-million dollar opportunity to the economy from birds (tourism/bird watching). What do we know about the avian effects from wind power sites? Birds are killed and the impacts and usage are variable. Raptors are at a higher risk from ridge sites as they use the ridges more. The nocturnal migrants may also be of concern. Avoidance of areas with high bird use is the only way to avoid bird mortality. The effects of bird mortalities are felt both locally and to the total population of the species. Potential impacts from direct bird

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mortality are from turbine strikes, electrocution, and other structures. Local usage effects are from short term displacement, habitat changes, activity disruption, and sometimes increased usage. Avoidance may be the main approach for dealing with bird mortality issues. Potential cumulative effects on birds are broader than direct collisions effects and include the increased cost in energy for the birds for migration. Virginia's location is very important to many birds, especially raptors<sup>1</sup>. Approximately 1.8 to 2.2 birds deaths per turbine per year equate to ~30,000 killed per year based on current wind turbines.

Green energy will only be green if all the factors are considered and we need data on birds as well as on bats in order to determine true impacts. Things that we need to know prior to siting these wind projects are how many birds use potential sites; what kinds of birds use potential sites; how is usage related to time of year; how is usage related to time of day; what are the species of special concern at each site; will development have impacts on local or total populations; can we address these impacts to mitigate them on the front end. Highest usage for birds is similar to bats in the mountain areas. Spring and late summer/fall are the prime migration times and those corridors are used heavily.

Additionally factors that need to be considered for off-shore development were discussed (pre- and post-construction monitoring is much more difficult in the marine environment; avian knowledge going into projects is less than with land based data sets; some worldwide conservation concern species are present; grid cabling and vibrational interference impacts to marine mammals; birds are known to habituate to the wind farms and avoid sites). While off-shore is usually good for direct mortality, it creates exclusion zones where birds won't forage. This is particularly important in the north Atlantic if sites are near breeding colonies. And the distance off-shore that birds will go is different depending on the birds.

For birds, migration is especially of concern. Most passerines (perching birds or song birds) migrate at night and the migration peaks in April-May and September-October. Raptors peak in late September and continue into November. The topographical use of the mountains by migrants is poorly understood (i.e., the need for more data).

The recommendations for considering wind energy projects is to continue to consider avian impacts in the planning process, to utilize national standards for site surveys and impact studies, to provide for thorough site study prior to construction, to utilize our local resources (i.e. CCB, Audubon) and form partnerships, to provide for long-term monitoring programs, to work with major bird conservation plans for opportunities and to avoid costly litigation and delay, and to sell to the public the relatively low direct impacts versus regional benefits of "greener" energy.

There are several management strategies that can be used to reduce potential negative impacts to bird populations, such as developing monitoring protocols to record impacts for adaptive management and mitigation because greatest impacts can be from only a few turbines (an issue with raptors was described); use of radar to detect migrating birds; turn off turbines during poor weather; make the turbines more visible to birds; align turbine arrays to allow for bird movement through the area; and ensure proper lighting to avoid collisions (as little as possible, white better than red). With the use of proper turbine location and proper long-term monitoring, impacts to avian species can be reduced. Additionally guidance is also available from other states, such as North Carolina, Maine and Pennsylvania.

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<sup>1</sup> [Raptors and Wind Energy Development in the Central Appalachians](#) by Katzner, Brandes, Lanzone, Miller and Ombalski

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#### **Agenda Item: Overview and Logistics for Subcommittee Process**

**Discussion Leader:** Carol Wampler, DEQ

**Discussion:** Carol provided the RAP members with an overview of the subcommittees and the focus of their topics. This PBR process will not involve the degree of site specific review that was used under the SCC process. RAP members will need to look to provide generic criteria/terms for the environmental considerations that are necessary for these projects.

*The full Wind RAP adjourned for lunch at 12:15pm. During lunch, the RAP leader met with the subcommittee chairs to discuss coordination of the logistics/objectives for those meetings. The RAP leader announced this meeting to the full RAP and other attendees, and she invited anyone interested to attend this meeting. See Attachment A for notes for this discussion.*

*The full Wind RAP returned from lunch and separated into their subcommittee meetings. See Attachment B for the Living Resources Subcommittee Meeting Notes, Attachment C for the Landscape Subcommittee Meeting Notes, and Attachment D for the General Subcommittee Meeting Notes.*

*The full Wind RAP reconvened at 3:25 pm.*

#### **Agenda Item: Statutory Construction**

**Discussion Leader:** Nikki Rovner, Deputy SNR (and RAP Member)

**Discussion:** Carol introduced Nikki Rovner, Deputy Secretary of Natural Resources, and described the importance of statutory construction. Nikki Rovner discussed the issue of statutory construction and its most pertinent rules, including issues that the RAP members will need to keep in mind. If there are questions, there are resources here and at the OAG. Statutory construction rules are rules that courts use to interpret legislation. The Sutherland Statutory Construction<sup>2</sup> book is often used as reference. It was noted that these are the rules we need to presume the legislators knew when this statute was developed. More information on statutory construction is available at [http://en.wikipedia.org/wiki/Statutory\\_construction](http://en.wikipedia.org/wiki/Statutory_construction). The point of statutory construction is that neither does the intent of the drafter matter nor the intent of the legislature. This is important because it is also consistent with our RAP guidelines. By participating in this process, once consensus is reached, then we each agree to these rules and will not go outside to act against the process unless that is agreed to upfront. For this renewable energy statute and all Virginia statutes, there is no legislative record, and there is no official record of legislative intent. Virginia does not have statements of policy in our legislation, so we cannot presume to know why the legislature passed this law and must, therefore, confine ourselves to the words on the page.

At the last RAP meeting, Title 67 was discussed, and yes, this is different from most policies because it is a policy codified in state law. But beyond that, we cannot presume to know a lot about the policy. We will need to rely on the plain meaning of the words on the page (i.e., meaning as in the dictionary), exception is terms of art, such as permit by rule. We must assume, also, that there was good drafting and no redundancy and every word of the statute has a meaning. Additionally, through out the Code of Virginia, one must assume that words used in the Code have the same meaning through-out the code, unless defined for that section only. If we do not know what something means, we can look at what it means in other sections. Another issue is *Expressio unius est exclusio alterius*, which means the express mention of one thing excludes all others. This is important to us because of exclusion. Sometimes a list in a statute is illustrative, not exclusionary. This is usually indicated by a word such as "includes" or "such as." In this statute it lists what to include in a PBR. This list is not exclusive, so additional things can be required, if necessary.

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<sup>2</sup> Norman J. Singer, Sutherland Statutory Construction, 6th Edition, Vol. 1A, §20.12 (West Group 2000)

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Another important concept in statutory construction is the Chevron case decision by the Supreme Court, Deference to Administrative Interpretations. This deference pertains to administrative interpretation by the agency. If the statute is not clear and grants power to an agency to implement the law, the courts will defer to the agency's reasonable interpretation of the statute. When drafting this regulation, we are entitled to some deference.

Permit by Rule (PBR) is not a term that is defined in the Code of Virginia. We do have regulations that define a PBR. As the implementing agency, DEQ does have the authority to define a PBR. It is correct to assume that since the PBR term was used, it has meaning and as there is existing regulation on PBRs, that has meaning as well. It is likely the court would say to the extent that we can reasonably follow the existing PBR model, then that is what we should do. So there is some latitude, but we need to follow the model of PBR already in regulation as fully as practicable.

Questions on following as closely as possible the waste PBR process were asked as there are items in our statute that are very different from what is in the waste regulations. It was noted that the waste regulation was what we have to work from, but where reasonable there can be differences.

It was noted that this RAP has very complex twin goals to facilitate permitting of renewable wind energy projects and to protect Virginia's natural resources. There was further discussion on where in this statute it states/directs that these are the goals that we will need to meet for this regulation. If we do this, then we will meet the requirements of this statute and be able to provide a regulation that can be approved. Carol also informed the RAP that the NOIRA for this regulatory action has been approved by the Governor's Office. The NOIRA will now go to public notice stage.

### **Agenda Item: Public Forum**

**Discussion Leader:** Carol Wampler, DEQ

**Discussion:** No one had signed up to speak, so no public forum was held.

### **Agenda Item: Brief Reports by Subcommittee to Plenary Group**

**Discussion Leader:** Subcommittee Chairs

**Discussion:** Each of the chairs reported on the work done in their subcommittee meetings. See subcommittee meeting notes for details of the discussions.

- ✓ Living Resources subcommittee provided the various impacts that they will be working on in their group. This group also asked some clarification questions:
  - What happens if the PBR is issued but other permits are not granted?
  - Statute clearly says that this PBR is for construction of these facilities and not for the transmission/distribution of the energy generated. However, what about substations? These are transmission and distribution, but are usually co-located with wind turbines. So will these be covered under a separate process?
  - Areas of state where DMME has assumed authority for stormwater? Who would cover what?
  - What constitutes a facility?
  - A list of the state permits that are required for these facilities would be helpful.
- ✓ Landscape subcommittee also provided a list of issues that their group may need to address including ones that may have crossover with the other subcommittees. This included environmental issues as well as jurisdiction issues.
- ✓ General subcommittee report provided the list of issues for that group. These will include: applicability; definitions; documentation necessary for PBR; determination of coverage/length of coverage; public

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comment; fees; inspection/monitoring; and enforcement issues. There was also discussion on the information and process as it works now.

The meeting was then wrapped up and it was noted that the majority of the time for the next meeting on August 27<sup>th</sup> will be spent in your subcommittees. There will be a presentation by Maria Papadakis, JMU, on siting scoring study done by JMU. It was also noted that there is an Energy Environment Committee meeting August 18<sup>th</sup> at 10am, Senate Room A, and George Hagerman will be presenting on off-shore issues. A question on how the subcommittee chairs will coordinate on presentations was asked. The subcommittee chairs will coordinate on these issues so that others may attend or the presentation provided to the plenary group. The chairs will have authority over their subcommittee meeting agendas with Carol's concurrence. A question on the individual site plan was asked and it was noted that the general subcommittee will be addressing; however, the plenary group will be asked for intermediate feedback on any issues where it is deemed necessary. In those cases, the chair can email Carol to add to the agenda near the beginning of the subsequent RAP plenary meeting.

**DEQ Wind Energy Regulatory Advisory Panel (Wind RAP)**  
Attachment A – Final Notes for Lunch Meeting of Subcommittee Chairmen  
August 6, 2009

**Location:**        **DEQ Central Office, 2<sup>nd</sup> Floor Conference Room A**  
629 E. Main Street, Richmond, VA 23219

**Start:**    12:15 p.m.

**End:**      1:00 p.m.

**Lead & Recorder:** Carol Wampler, DEQ

**Subcommittee Chairs Present:**

Maria Papadakis, JMU – RAP Alternate & Landscape Subcommittee Co-Chair

Judy Dunscomb, TNC – RAP Member & Living Resources Subcommittee Chair

Nikki Rovner, Deputy SNR – RAP Member & General Subcommittee Chair

**Other Attendees:**

None

**Agenda Item: Coordination of the Logistics/Objectives**

**Discussion Leader:** Carol Wampler, DEQ

**Discussion:** This meeting was held to discuss coordination of the subcommittee actions within the operation of the RAP. The meeting was announced to the RAP and RAP public attendees, but no observers chose to attend.

The subcommittee chairs will seek to develop a list of issues to be addressed by each subcommittee by the end of the subcommittee meetings today. The issues will be discussed and analyzed at future subcommittee meetings.

At end of each subcommittee meeting, chairs/recorders will give a list to Carol of any action-needed issues (ex. legal questions for AG's office; referral of issue to another subcommittee; issues beyond the scope of this regulation that should be listed in a "manual" for citizens, local governments, and developers interested in development of wind project).

Typically, General Subcommittee will set forth processes & procedures of getting permit by rule; this subcommittee may help develop a flow chart or chronological list of what has to be done to develop a wind project (per Theo de Wolff's request).

Living Resources & Landscape Subcommittees will generally be formulating the recommended standard(s) that constitute "significant adverse impacts" and would thus trigger mitigation and/or other processes being described by General Subcommittee. Where there are substantive aspects to these procedures, substantive subcommittees will generally address those aspects and make recommendations.

Subcommittees should do "spade work": frame issues, narrow issues, propose one or more standards for each issue (including supportive data, cites, justification) to bring to the plenary group. If subcommittee can reach consensus easily, that is good. If not, then chair should report multiple recommendations (with supporting docs for each), as well as support for each position (large majority of subcommittee supports this position, subcommittee evenly split, etc.). Plenary group should have opportunity to review all issues and come to group consensus. Subcommittee recommendations will be important in facilitating plenary consensus development.

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Attachment A – Final Notes for Lunch Meeting of Subcommittee Chairmen  
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Format of subcommittee recommendations is at discretion of subcommittee chairs. It would be helpful, however, if subcommittees seek to draft proposed regulatory language. This would provide detail for plenary group's consideration and possibly assist DEQ staff in drafting final draft reg.

Carol would like to reserve last 3 RAP meetings for plenary group to seek consensus on subcommittees' recommendations. If subcommittee chairs think they will need to convene extra meetings in addition to RAP meetings, they should contact Carol, Cindy (who will provide public notice), Debra (who will arrange meeting space and a recorder). If chair determines that an extra subcommittee meeting is needed, please try to schedule during same week as RAP meetings so that Carol can attend.



**DEQ Wind Energy Regulatory Advisory Panel (Wind RAP)**  
Attachment B – Final Notes for Living Resources Subcommittee Meeting  
August 6, 2009

**Location:**        **DEQ Central Office, 2<sup>nd</sup> Floor Conference Room A**  
629 E. Main Street, Richmond, VA 23219

**Start:**    1:05 p.m.

**End:**     3:20 p.m.

**Subcommittee Chair:** Judy Dunscomb, TNC

**Recorder:** Melissa Porterfield- DEQ

**Subcommittee Members Present:**

Tom Smith, DCR

Bob Bisha, Dominion

Rick Reynolds, VDGIF (alternate)

**Subcommittee Members Absent:**

Ray Fernald, VDGIF

**Guests/Speakers:** none

**Public Attendees:**

Lucille Miller-HRD

**Discussion Leader:** Judy Dunscomb

**Discussion:** Ms. Dunscomb began the meeting by thanking the subcommittee members for participating on the living resources subcommittee. The goal of the subcommittee is to discuss issues and then bring recommendations to the full committee. The focus of the group will be to look at what goes into a wind energy project and to identify impacts relating to living resources that may be caused by the project. Each subcommittee will develop a list of issues pertaining to their assigned topics and identify how they should be addressed.

Issues that this subcommittee will address include:

- What types of documents are needed to obtain a PBR and the adequacy of the documents
- What would constitute an adverse impact?
- Adequacy of a mitigation plan

Some issues identified during discussions included:

- The need for state agencies to develop a list of applicable permits so expectations would be known.
- The need to obtain legal advice on what happens when a project is provided with PBR status, then a related permit is rejected or not issued.
- For the PBR, would applying for a permit satisfy the requirement for the PBR or would the permit need to be obtained before the PBR status was provided?
- Are there significant permits that need to be obtained prior to obtaining a PBR?
- Questions concerning who is in charge of permitting- in some cases there may be multiple agencies involved (DCR, DMME, and localities were all identified as potential permitting authorities that may overlap.)
- The need to understand the financing of wind projects and the additional requirements a project may need to meet if federal or state money is involved. What permits are triggered in there is a federal nexus (federal money, federal land, wetland impacts)?

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Attachment B – Final Notes for Living Resources Subcommittee Meeting  
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- What is a project? What defines a project? How far apart do two sites need to be to be considered separate sites?
- How to address environmental impacts due to transmission and distribution? SCC retains approval under §56.580 of the Code of Virginia.

A flowchart developed by Ms. Dunscomb was discussed by the subcommittee. The flowchart identified the three phases of projects - Development, Operation, and Decommissioning of projects. Impacts related to these three phases of projects were identified and discussed. The flowchart was revised during the meeting to list additional potential impacts from wind projects that the subcommittee will discuss further in the future. These additional impacts included impacts to wetlands, and impacts from invasive species and water withdrawals. There was a thought expressed that the group may want to consider distinguishing between direct and indirect impacts. There was also the idea suggested that the group should consider categorizing impacts as either temporary or reclamation impacts or permanent impacts.

During discussions the subcommittee identified the following questions that would need to be addressed concerning the PBR and impacts to living resources:

- What is the term of the PBR? (Forever or does it expire?)
- Does the PBR cover siting or operation or both?
- What happens when you need to replace the turbine? (impact on PBR)
- What happened when conditions change after the permit is issued?
- How would modifications to the permit be handled in the future? (in relation to changes needed in response to more up to date information- for example an operational study?)

Wind facility replacement would be an additional scenario that was identified that needed to be added to the flowchart and addressed during the development of the PBR.

The major impacts to living resources that the subcommittee identified during the subcommittee meeting are as follows: (Listing prioritized)

- Direct mortality to bats
- Any threatened and endangered species- including plants and animals (federal and state)
- Direct mortality to birds
- Natural Heritage resources
- Invasive species
- Wetlands\*
- Aquatic resources\*

\* indicates another permit process with jurisdiction

**Action items:**

Bob Bisha to investigate the following and provide to Carol Wampler for distribution to the subcommittee:

- the amount of water needed for temporary concrete plants during construction of the site
- the size of the clearing around a turbine during construction and during operation
- the period of time between oil changes inside turbines

The next meeting will be held on August 27, 2009.

**DEQ Wind Energy Regulatory Advisory Panel (Wind RAP)**  
Attachment C – Final Notes for Landscape Subcommittee Meeting  
August 6, 2009

**Location:**        **DEQ Central Office, 2<sup>nd</sup> Floor Conference Room B**  
629 E. Main Street, Richmond, VA 23219

**Start:**    1:00 p.m.

**End:**     3:15 p.m.

**Subcommittee Chair:** Maria Papadakis, JMU

**Recorder:** Gary Graham, DEQ

**Subcommittee Members Present:**

Ronald Jenkins, DOF

Larry Jackson, APCO

Tony Watkinson, VMRC

Dan Holmes, PEC

Larry Land, VACO

**Subcommittee Members Absent:**

Jonathan Miles, Co-chair

Julie Langan, DHR

Stephen Versen, VDACS

**Public Attendees:**

John Davy, DCR

Roger Chaffe, OAG

Perida Giles, VDACS (observer for Stephen Versen)

David Whitehurst, VDGIF

Larry Lombardi, City of Norfolk

**Agenda Item: Bucket List-What your group hopes to discuss, accomplish, or include in regulation**

**Discussion Leader:** Maria Papadakis

**Discussion:** List of Topics:

Substantive Environmental Issues:

Viewsheds

Water quality impacts

Species

Forest fragmentation and associated impacts

Potential land use conflicts/changing uses

Habitat (or land cover) types

Impacts by timeframe (construction, operation, and decommissioning):

- Site and facility construction
- Road construction/maintenance
- Erosion and sedimentation
- Pads
- Interconnection
- Site access
- Topography factors
- Land-based vs. offshore impacts
- Cumulative impacts

Substantive Legal/Process Issues:

- Public safety/Zoning
  - Tower fall
  - Flicker

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Attachment C – Final Notes for Landscape Subcommittee Meeting  
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- Ice throw
  - Noise
  - Nuisance
- Monitoring (pre-/post-)
- Local vs. State vs. Federal Authority
  - Compliance plan/zoning/L.U.
  - Local permitting conditions for special or conditional use
  - Provisions for counties with no zoning requirements or review assets
  - Legal authority over coastal zones
  - Allowing localities courtesy comment in coastal zone sites
  - Who does public meetings for coastal zone sitings
  - How federal permitting interfaces with state permitting
  - Mitigation associated fees
  - Impact on cultural or historic assets
  - FAA requirements
  - Military land or coastal use restrictions
  - Interference with shipping lanes or fishing areas
  - Time period requirements for permitting reviews and interagency consultation
  - Easement issues for facilities under 138 Kv
- Regulation end-running (e.g. breaking up a project into smaller projects to avoid requirements)

**Agenda Item: Priorities for next meeting and assignments.**

**Discussion Leader:** Maria Papadakis

**Discussion:** List of topics and persons/agencies responsible for investigating topics:

- |  |                        |
|--|------------------------|
| 1. Terminology to use (i.e. habitat vs. land cover, etc.): | - Ronald Jenkins, DOF  |
| 2. Erosions and sedimentation issues:                      | - Maria Papadakis, JMU |
| 3. Potential land use conflicts                            | - Steve Versen, VDACS  |
|  | - Tony Watkinson, VMRC |

Referred Questions:

- ✓ Legal issue 1: Carol Wampler.  
Is there statutory authority to set a de minimis exemption level for facilities too small to be covered by this regulation?
- ✓ Legal Issue 2: Carol Wampler.  
Is there a legal boundary for local governing bodies or planning groups in costal zones that limits the projects upon which they will get to comment or consult (i.e. off shore and how far)?
- ✓ Subcommittee Overlap Issue 1: Carol Wampler.  
To what extent is the "Living resources" subcommittee dealing with habitat? Is there a point at which the "Landscape" subcommittee should limit discussion to prevent conflict?

**DEQ Wind Energy Regulatory Advisory Panel (Wind RAP)**  
Attachment D – Final Notes for General Subcommittee Meeting  
August 6, 2009

**Location:**        **DEQ Central Office, 2<sup>nd</sup> Floor Conference Room C**  
629 E. Main Street, Richmond, VA 23219

**Start:**            1:10pm  
**End:**             3:20pm

**Subcommittee Chair:** Nikki Rovner, Deputy Secretary of Natural Resources  
**Recorder:** Debra Miller, DEQ

**Subcommittee Members Present:**

James Golden, DEQ  
Ken Jurman, DMME

Jayme Hill, Sierra Club  
Mary Elfner, Audubon

**Subcommittee Members Absent:**

John Daniel, Independent developers' representative  
Theo de Wolff, Independent developer

**Public Attendees/Observers:**

David Phemister, TNC (alternate)

**Discussion Leader:** Nikki Rovner, Chair

**Discussion:** This subcommittee will be dealing with the scope of regulation, de minimis exemption, definitions of general application, legal questions, miscellaneous issues, procedures, and everything not covered by substantive subcommittees. A hand-out of the potential issues that this subcommittee will be dealing with was provided. Some of these issues will require application of judgment, some will require DEQ information, and others will require assistance from the Office of the Attorney General.

For instance, what will DEQ's determination that a PBR for a particular kind of small renewable energy project look like? Will there be a de minimis exemption? Will the determination be included in the regulation? Alternatively, if determination is made by the director, and he can do that by letter, the letter can include a determination that some of these projects are so small that they do not require a PBR. This letter can ask that the RAP come up with the de minimis exemption criteria.

It was suggested that one of the products for this group should be a flowchart as it will fit into manual or guide and that will help us to develop the regulation. So that would be two products, a flowchart and parts of the regulation. If the subcommittee cannot arrive at a consensus on a particular issue, we will try to provide the plenary group with a limited set of two to three options that the subcommittee discussed.

It was clarified that the goal is to complete the subcommittee meetings by September 17, 2009.

The subcommittee reviewed the list of issues provided. It was agreed that everyone has a general understanding that a PBR is essentially a checklist of documents and certifications to be submitted by the applicant to DEQ. The list of documents and certifications in the statute is not necessarily all-inclusive; if necessary, additional items can be added. A question was raised as to whether there are any circumstances that could lead to further pre-construction analysis beyond 12 months. The pre-construction monitoring is pretty clearly limited to 12 months in the statute, but there is, perhaps, more flexibility in the mitigation plan. How will it be dealt with if the 12-month is a year that is unique in some way (e.g., a drought)? Perhaps that issue could be noted, and then the mitigation plan addresses the unique circumstances.

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The subcommittee will need to come up with standards for the site plan, operating plan and design requirements referenced in the statute. It was noted that these questions should be deferred until the industry folks are in attendance, and that the subcommittee should look at standards being imposed by other states. Pre-construction monitoring should impact design/construction. What other requirements should there be with regard to design and operation are there? These can include siting criteria (set-backs/restrictions). Sometimes these will be local issues, so how far does the state attempt to go into these areas.

There will be opportunities to communicate with the other subcommittees through the chairs. An operating plan might address curtailment, but curtailment could also be an element of mitigation, such as a cut-in rate to protect bats. Mitigation plan requirements for curtailment and deterrence will be for the other subcommittees to provide.

The permit fees that will be imposed for the PBR will be dependent on what DEQ will need to do to implement the regulation and the number of facilities that will be involved. Another consideration is how many years down the line will DEQ be overseeing/inspecting these projects. And that will depend on the length of time the facility is covered under the PBR. If a facility holds a DEQ permit, then they are subject to some type of an inspection frequency. The statute indicates that the fee shall cover the costs. The subcommittee needs to insure that there is sufficient funding to do this work.

The next issue that was discussed was that the applicant has to submit or have obtained all other environmental permits. What are these permits? To what extent should these be referenced in the regulation? Normally regulations will just require that applicants are responsible to obtain whatever other permits are necessary. Information regarding permits that might be required could be included in the flowchart. The statute requires that all permits have either been applied for or have obtained. The developer cannot go forward, however, until the proper permits are obtained. This regulation may provide more certainty of the things that applicants will need to do for a wind energy project. A PBR does rely on certifications and developers providing accurate information. If they do not, then they may risk “losing” their PBR.

A specific question was raised on what DEQ would do with the analysis required by Line 57-58 (potential environmental impacts). Any detailed requirements regarding this information should be based on how it will be used.

Should the regulations include standards for decommissioning standard state-wide? It was noted that these projects will still need the SCC to issue certificate of public necessity and convenience for an electric generation facility.

Once the developer has submitted the information required, then DEQ will check to ensure that all of the information is submitted as required by the regulations and then DEQ will issue a letter saying that you have submitted the necessary information and met the regulatory requirements for a PBR.

The group then looked at the list of required submittals as listed in the statute and discussed some tentative thoughts about how DEQ might evaluate each submittal:

1. A notice of intent is very straight forward. It is either submitted or not.
2. A local certification/approval. Again it is either in or not.
3. Interconnection studies, copy of this. Another agency may determine adequacy.
4. Interconnection agreement – again another agency determines adequacy.
5. PE Certification – it either is in or not.

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6. An analysis of potential environmental impacts – that is a bit different. DEQ could look at this as what is sufficient?
7. Where relevant, analysis and study of natural resources. Again, this may need criteria to review and other agency input (DHR, DGIF). The reason the statute says “where relevant” is because this statute covers all small renewables, not just wind.
8. For list items 6, 7, 8 sections, this group may need to come up with the process, what is sufficient, and how DEQ can determine that the standards are met. The challenge will be coming up with one size fits all for these projects. As required by statute, DEQ still needs to consult with other agencies that are the experts for a particular item.
9. PE Certification – again this is a certification, DEQ will not be independently evaluating the design plan.
10. An operating plan – standards will be needed of what it should include.
11. What will need to be included on a site plan? The statute says that the plan must “detailed.” Typical site plans will include information necessary to build a project; it may not include all information detailing all natural resources. The industry representatives on the subcommittee may be able to provide more information. Future discussions will explore whether there is a way to ensure off-site impacts are considered. There will also be other requirements from the other subcommittees that will include the information that is necessary for these sites and it may be in another format and not necessarily on the site plan. This will require further discussion.
12. Applicant certification - it either is in or not.  
Term of the permit or some type of reopener clause may be necessary to include in the regulation as this industry is changing so quickly - termination of coverage and how long you are covered.
13. Public meeting
14. 30-day public review and comment period

In the VSWMR, this public meeting and comment period are held by the owner/operator submitting the information for the PBR. We need to ask the attorney general's office if the applicant conducts both the public meeting and the 30-day public comment period or the applicant conducts the public meeting and DEQ conducts the public comment period.

Fees are suppose to cover 100% of DEQ costs, but that will depend on what the requirement will be and what DEQ has to do for these PBRs. The fund can be used only as specified in the statute. Flag this as an issue for discussion. How can the fund be used?

It was suggested that DEQ's Enforcement Director attend one of the meetings to give an overview of enforcement.

Subcommittee members should also send Nikki a list of what terms need to be defined. It was requested that we start with the questions all ready presented to Nikki from Carol.

**Action items:**

- Debra will research and provide information on design, site plan and operating plan requirements for wind plants from Pennsylvania, West Virginia, Ohio, and Vermont.
- All subcommittee members are asked to please email Nikki questions to ask the SCC, but send only to Nikki not to any other RAP members
- Subcommittee members should also send Nikki a list of what terms need to be defined.
- Nikki Rovner will pull a list together of relevant definitions that are already in the Code of Virginia or the Virginia Administrative Code.

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The next meeting will be held on August 27, 2009.